

(c) defining a via in said insulating layer, said via having a first end and a second end, one of said first and second ends of the via contacting one of said first and second electrically conductive layers the other of said first and second ends of the via contacting neither one of said first and second electrically conductive layers whereby said via mimics a connecting via between said first and second electrically conductive layers without making an electrical connection between said first and second metal layers.

19. A semiconductor device for preventing and/or thwarting reverse engineering thereof made according to the method of claim 18.

20. The device as claimed in claim 1 wherein the first metal layer is an upper layer and the second metal layer is a lower layer relative to the insulating layer.

21. The device as claimed in claim 5 wherein the second metal layer is an upper layer and the first metal layer is a lower layer relative to the insulating layer.

REMARKS:

In the Official Action, the Examiner sets forth a non-unity objection, asserting that the invention falls into two groups, namely, claims 1-8 directed to a device and claims 9-16 directed to a method. The Examiner asserts that the product, as claimed, can be made by "another and materially different process". The Examiner asserts that "the via could be formed by the selective deposition of the two metal layers and the insulating layer."

The Examiner's comments reflect a misunderstanding of the claimed invention. There is nothing in independent method claim 9 or independent method claim 13 which excludes that the "via could be formed by the selective deposition of the two metal layers and the insulating layer" as contrarily asserted by the Examiner. Generally speaking, the steps of a method claim can be performed in any order in terms of viewing the scope of the method claim. Thus, the via formed in step (c) could have been recited before steps (b) or as a part of step (b) without changing the scope of the claim.


Moreover, the Examiner's assertion that "the via could be formed by the selective deposition of the two metal layers and the insulating layer" is exactly how the via is filled with metal as described in Applicant's own Patent Application! Both claims 9 and 13 read on forming the via "by the selective deposition of the two metal layers and the insulating layer" to quote the language used by the Examiner.

With all due respect, the justification for the restriction requirement is not a proper justification. The reason the Examiner is making the restriction requirement is that the Patent Office, for its own convenience, has decided to establish two different art groups for examining semiconductor related technology, one for the examination of method claims and the other for the examination of device claims. It seems that the Examiner is trying to comply with United States Patent Office policy with respect to how these claims are examined without reference to the issue of whether a restriction requirement really makes sense. It is submitted that if the examining groups were not bifurcated, this restriction requirement would not have been made.

New claim 19 is submitted herewith. It is an apparatus claim which is dependent upon a method claim.

Turning now to the election of species requirement, the Applicant submits herewith a new apparatus claim (claim 17) and a new method claim (claim 18), which have been written generically to the two species identified by the Examiner.

Moreover, the Examiner is requested to state, for the record, exactly why the two species are "patentably distinct" as asserted by the Examiner in the Official Action. For example, claim 1 recites first and second metal layers, without specifically reciting which layer might be considered an upper layer and which layer might be considered a lower layer, for example. Thus, in terms of claim 1, the first layer could be an upper layer and the second layer could be a lower layer. Claim 1 goes on to recite that one of the ends of the via is connected to the first layer (the upper layer in this hypothetical) and spaced from the second layer (the lower layer in this hypothetical). Claim 5, also recites first and second layers, again without specifically reciting which layer is an upper layer and which layer is a lower layer, for example. In terms of claim 5, the second layer could be



an upper layer while the first layer could be a lower layer. Then claim 5 goes on to recite that an end of the via is connected to the second layer (the upper layer in this interpretation of claim 5) and spaced from the first metal layer (i.e., the lower layer in this particular interpretation of claim 5). As can be seen, claims 1 and 5 could be read upon identical configurations, yet the Examiner asserts those two claims are "patentably distinct".

This "upper" and "lower" concept is now reflected by new claims 20 and 21. Does the Examiner still maintain that these claims are patentably distinct? If so, the examiner is respectfully requested to explain how these two claims differ from one another.

Additionally the Examiner's action in making this restriction requirement violates MPEP Section 806.04(e) which indicates that species "are always the specifically different embodiments" and that claims "are never species." The Examiner has not identified the "specifically different embodiments" mentioned in this section and moreover has based the election requirement simply on the existence of claims. Since claims "are never species" of an invention, the Examiner has done that which MPEP Section 806.04(e) says he should not do.

The Applicants expect the Examiner to use a consistent standard with respect to that which is patentably distinct both in terms of setting forth an election of species requirement and in terms of having to differentiate the invention from the prior art.

The Applicants hereby provisionally elect the apparatus claims for examination. The apparatus claims presently of record are claims 1 - 8, 17, and 19 - 21. With respect to the election of species requirement, Applicants hereby provisionally elect the first mentioned species, which includes not only claims 1-4 mentioned by the Examiner, but also at least newly filed claims 17 and 19 - 21. All of these claims are readable on the same "species" as claim 1.

Reconsideration of the Application as amended is respectfully requested.

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The Commissioner is authorized to charge any additional fees which may be required or credit overpayment to deposit account no. 12-0415. In particular, if this response is not timely filed, then the Commissioner is authorized to treat this response as including a petition to extend the time period pursuant to 37 CFR 1.136 (a) requesting an extension of time of the number of months necessary to make this response timely filed and the petition fee due in connection therewith may be charged to deposit account no. 12-0415.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C., 20231 on

October 25, 2001
(Date of Deposit)

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